

# Analog Oscilloscope

## LOW-COST, 20MHz/40MHz/50MHz

### SPECIFICATIONS

Model		20MHz	40MHz	50MHz	
Vertical system					
Sensitivity	5mV~5V/DIV±3%, 10 steps in 1-2-5 sequence				
Vernier sensitivity	≤1/2.5 of panel indicated value				
Bandwidth	DC (AC 10Hz)~20MHz	DC (AC 10Hz)~40MHz	DC (AC 10Hz)~50MHz		
Rise time	Approx. 17.5ns	Approx. 8.75ns	Approx. 7ns		
Input impedance	Approx. 1MΩ//Approx. 25pF				
Vertical mode	CH1, CH2, DUAL (ALT/CHOP), ADD, CH2 INV				
Chopping repetition frequency	Approx. 250kHz				
Input coupling	AC, GND, DC				
Max. Input voltage	400V peak-peak, AC frequency≤1kHz				
Common mode rejection ratio	>50:1 at 50kHz sine wave (set CH1 and CH2 at same sensitivity)				
Horizontal system					
Sweep time	0.2us~0.5s/DIV±3%, X10MAG: ±5% (20ns~50ns/DIV uncalibrated), 20 steps in 1-2-5 sequence				
Vernier sweep time control	≤1/2.5 of panel indicated value				
Sweep magnification	X10 (fastest sweep time 20ns/DIV)				
Linearity	±5%, X10MAG: ±10% (0.2s~1us)				
Trigger system					
Trigger mode	AUTO, NORM, TV-V, TV-H				
Trigger level lock	Not provided				
Trigger source	CH1, CH2, ALT, LINE, EXT				
Trigger coupling	AC: 20Hz to full bandwidth				
Trigger slope	"+" or "-"				
Sensitivity	Frequency	20Hz~2MHz	2MHz~20MHz	20MHz~40MHz	40MHz~50MHz
	CH1, CH2	1DIV	1.5DIV	2.5DIV	3DIV
	ALT	2DIV	3DIV		
	EXT	200mV	800mV		
	TV	Sync pulse>1DIV (EXT: 1V)			
External trigger input					
Input impedance	Approx. 1MΩ//Approx. 25pF				
Max. input voltage	400V (DC+AC peak), AC frequency≤1kHz				
X-Y mode					
Sensitivity	5mV~5V/DIV±3%				
X-axis bandwidth	DC~500kHz (-3dB)				
Phase error	≤3° at DC~50kHz				
Calibration signal output	1kHz square wave; 2Vpp±2%; Output impedance: approx. 1kΩ				
Frequency counter (only for TOS-2020CF, TOS-2040CF, TOS-2050CF)					
Display	6 digits LED				
Accuracy	±0.01%				
Component test (only for TOS-2020CT, TOS-2040CT, TOS-2050CT)					
Testing subject	Resistor, Capacitor, Coil, Diode, Zener or simple combination of the components				
Testing voltage	Approx. 9Vac pp				
Testing frequency	50/60Hz				
Testing current	Approx. 0.6mA				
CRT					
Type	6-inch rectangular with internal graticule, 8x10DIV (1DIV=1cm)				
Phosphor	P31				
Accelerating voltage	Approx. 2kV (20MHz); Approx. 12kV (40MHz)				
Trace rotation	Adjustable at front panel				
General					
Power source	AC110V/220V±10%, 50/60Hz, Max. 35VA				
Accessories	Power cord x1, Operation manual x1, Probe x2				
Dimension (WxHxD)	310x150x455mm				
Weight	Approx. 8kg				